SUMMARY OF THE 2006 CDC SEXUALLY TRANSMITTED DISEASES (STD) TREATMENT GUIDELINES
STD CONTROL PROGRAM – RHODE ISLAND DEPARTMENT OF HEALTH

These guidelines for the treatment of STDs reflect the recommendations of the **2006 CDC STD Treatment Guidelines**. These are outlines for quick reference that focus on STDs encountered in an outpatient setting and are not an exhaustive list of effective treatments. Please refer to the complete document of the CDC for more information or call the STD Program. These guidelines are to be used for clinical guidance and are not to be construed as standards or inflexible rules. Clinical and epidemiological services are available through the STD Program and staff is also available to assist healthcare providers with confidential notification of sexual partners of patients infected with STDs and/or HIV. Please call for any assistance. **PHONE: (401) 222-2577. FAX: (401) 222-1105. STD CONTROL PROGRAM, RHODE ISLAND DEPARTMENT OF HEALTH, 3 CAPITOL HILL, ROOM 106, PROVIDENCE, RI 02908.**

DISEASE	RECOMMENDED TREATMENT	ALTERNATIVES
SYPHILIS (see 2006 CDC guidelines for follow-up recommendations and management of congenital syphilis)		
PRIMARY, SECONDARY OR EARLY LATENT (< 1 YEAR) **Adults**	• Benzathine penicillin G 2.4 million units IM in a single dose	**(For penicillin allergic non-pregnant adult patients)** Doxycycline 100 mg orally 2 times a day for 14 days ***OR*** Ceftriaxone 1 g daily IV or IM for 8-10 days **OR** Azithromycin 2 g orally once[1]
Children	• Benzathine penicillin G 50,000 units/kg IM, up to the adult dose of 2.4 million units, in a single dose	
LATE LATENT (> 1 YEAR) OR LATENT OF UNKNOWN DURATION **Adults**	• Benzathine penicillin G 2.4 million units IM **for 3 doses**, 1 week apart (total 7.2 million units)	• Doxycycline 100 mg orally 2 times a day for 28 days **for adults only**
Children	• Benzathine penicillin G 50,000 units/kg IM up to the adult dose of 2.4 million units, administered as three doses at 1 week intervals (total 150,000 units up to the adult total dose of 7.2 million units)	
NEUROSYPHILIS	• Aqueous crystalline penicillin G 18 - 24 million units per day, administered as 3-4 million units IV every 4 hours or continuous infusion, for 10-14 days	• Procaine penicillin 2.4 million units IM once daily **plus** probenecid 500 mg orally 4 times a day, both for 10-14 days
HIV INFECTION	• **For primary, 2nd and early latent syphilis**: Treat as above. Some specialists recommend three doses. • **For late latent syphilis or latent syphilis of unknown duration**: Perform CSF examination before treatment	
PREGNANCY	**Penicillin is the only recommended treatment for syphilis during pregnancy. Women who are allergic should be desensitized and then treated with penicillin. Dosages are the same as in non-pregnant patients for each stage of syphilis.[2]**	
GONOCOCCAL INFECTIONS: Treat also for chlamydial infection if not ruled out by a sensitive test (nucleic acid amplification test)		
Update to CDC's STD Treatment Guidelines, 2006: Fluroquinolones No Longer Recommended for Treatment Of Gonococcal Infections (MMWR 4/13/2007 / 56(14);332-336		
ADULTS **CERVIX, URETHRA, RECTUM**	• Ceftriaxone 125 mg IM in a single dose ***OR*** • Cefixime 400 mg orally in a single dose	• Spectinomycin[5] 2 g IM in a single dose ***OR*** • Single-dose cephalosporin regimens **See 2006 CDC guidelines for discussion of alternative regimens**
PHARYNX	• Ceftriaxone 125 mg IM in a single dose	
CONJUNCTIVA	• Ceftriaxone 1 g IM in a single dose plus lavage the infected eye with saline solution once	
NEONATES **OPHTHALMIA NEONATORUM[7]** **INFANTS BORN TO INFECTED MOTHERS**	• Ceftriaxone 25-50 mg/kg IV or IM once (not to exceed125 mg)	
CHILDREN (≤45KG) VAGINA, CERVIX, URETHRA, PHARYNX, RECTUM	• Ceftriaxone 125 mg IM in a single dose	• Spectinomycin[5] 40 mg/kg IM in a single dose (maximum 2 g)
PREGNANCY	• Ceftriaxone 125 mg IM in a single dose ***OR*** • Cefixime 400 mg orally in a single dose	• Spectinomycin[5] 2 g IM in a single dose
CHLAMYDIAL INFECTIONS		
ADULT	• Azithromycin 1 g orally single dose ***OR*** • Doxycycline 100 mg orally 2 times a day for 7 days	• Erythromycin base 500 mg orally 4 times a day for 7 days ***OR*** • Erythromycin ethylsuccinate 800 mg orally 4 times a day for 7 days ***OR*** • Ofloxacin[3] 300 mg orally 2 times a day for 7 days ***OR*** • Levofloxacin[3] 500 mg orally once a day for 7 days
CHILDREN **< 45 KG** → **≥ 45 KG AND < 8 YEARS OF AGE** → **≥ 8 YEARS OF AGE** →	• Erythromycin base or ethylsuccinate 50 mg/kg/day orally divided into four doses daily for 14 days[6] • Azithromycin 1 g orally single dose • Azithromycin 1 g orally single dose ***OR*** • Doxycycline 100 mg orally 2 times a day for 7 days	
PREGNANCY	• Azithromycin 1 g orally single dose ***OR*** • Amoxicillin 500 mg orally 3 times a day for 7 days	• Erythromycin base 500 mg orally 4 times a day for 7 days ***OR*** Erythromycin 250 mg orally 4 times a day for 14 days ***OR*** • Erythromycin ethylsuccinate 800 mg orally 4 times a day for 7 days ***OR*** • Erythromycin ethylsuccinate 400 mg 4 times a day for 14 days

[1] Some patients who are allergic to penicillin may also be allergic to ceftriaxone. Doxycycline is the preferred treatment. Treatment failures with azithromycin have been reported (MMWR 2004;53:197-8). *T. pallidum* strains resistant to azithromycin have been documented in various geographic areas in the USA (NEJM 2004;351:454-8.). If neither penicillin nor doxycycline can be administered, and azithromycin as a single dose oral dose of 2 g is considered, close follow-up is essential to ensure successful treatment.

[2] Tretracycline/doxycycline contraindicated; erythromycin not recommended because it does not reliably cure an infected fetus; data insufficient to recommend azithromycin or ceftriaxone.

[3] Quinolones are contraindicated in pregnant women. No joint damage attributable to quinolone therapy has been observed in children treated with prolonged ciprofloxacin regimens. Thus children who weigh ≥ 45 kg can be treated with any regimen recommended for adults.

[4] Quinolones should not be used for infections in men who have sex with men or in those with a history of recent foreign travel or partners' travel, infections acquired in California or Hawaii, or infections acquired in other areas with increased quinolone resistant *Neisseria gonorrhoeae.*

[5] Unreliable to treat pharyngeal infections. Patients who have suspected or known pharyngeal infection should have a pharyngeal culture 3-5 days after treatment to verify eradication of infection.
[6] The efficacy of treating neonatal chlamydial conjunctivitis and pneumonia is about 80%. A second course of therapy may be required. An association between oral erythromycin and infantile hypertrophic pyloric stenosis (IHPS) has
been reported in infants aged less than 6 weeks treated with this drug. Data on other macrolides (azitrhomycin, clarithromycin) for the treatment of neonatal chlamydial infection are limited. The results of one study involving a limited number of patients suggest that a short course of azithromycin 20 mg/kg/day, 1 dose daily for 3 days may be effective for chlamydial conjunctivitis.
[7] Hospitalize and evaluate for disseminated infection.

DISEASE	RECOMMENDED TREATMENT	ALTERNATIVES
NONGONOCOCCAL URETHRITIS	• Azithromycin[8] 1 g orally single dose ***OR*** • Doxycycline 100 mg orally 2 times a day x 7 days	• Erythromycin base[9] 500 mg orally 4 times a day for 7 days ***OR*** • Erythromycin ethylsuccinate[9] 800 mg orally 4 times a day for 7 days ***OR*** • Ofloxacin[3] 300 mg orally 2 times a day for 7 days ***OR*** • Levofloxacin[3] 500 mg orally once a day for 7 days
EPIDIDYMITIS[10]	• Ceftriaxone 250 mg IM single dose ***PLUS*** • Doxycycline 100 mg orally 2 times a day for 10 days	• Ofloxacin[4] 300 mg orally twice daily for 10 days ***OR*** levofloxacin[4] 500 mg orally once a day for 10 days
PELVIC INFLAMMATORY DISEASE[11] **(outpatient management)** **These regimens to be used with or without metronidazole 500 mg orally twice a day for 14 days**	**REGIMEN A** Ofloxacin[3,4] 400 mg orally 2 times a day for 14 days ***OR*** Levofloxacin[3,4] 500 mg orally once a day for 14 days **REGIMEN B** Ceftriaxone 250 mg IM once ***OR*** Cefoxitin 2 g IM once plus probenicid 1 g orally once ***OR*** Other third generation cephalosporin ***PLUS*** Doxycycline 100 mg orally 2 times a day for 14 days	
PREGNANCY AND PID	**Patients should be hospitalized and treated with the appropriate recommended parenteral IV treatments (see CDC guidelines)**	
CHANCROID	• Azithromycin 1 g orally single dose ***OR*** • Ceftriaxone 250 mg IM single dose ***OR*** • Ciprofloxacin[3] 500 mg orally 2 times a day for 3 days ***OR*** • Erythromycin base 500 mg orally 3 times a day for 7 days (preferred by some experts if HIV co-infection)	
HERPES SIMPLEX VIRUS (for non-pregnant adults). See CDC 2006 guidelines for the management of herpes in pregnancy and in the neonate		
First clinical episode of genital herpes	• Acyclovir 400 mg orally 3 times a day for 7-10 days ***OR*** 200 mg orally 5 times a day for 7-10 days ***OR*** • Famciclovir 250 mg orally 3 times a day for 7-10 days ***OR*** • Valacyclovir 1 g orally 2 times a day for 7-10 days	
Daily Suppressive therapy	• Acyclovir 400 mg orally 2 times a day ***OR*** • Famciclovir 250 mg orally 2 times a day ***OR*** • Valacyclovir 500 mg orally once a day ***OR*** 1 g orally once a day	
Episodic Recurrent Infection	• Acyclovir 800 mg orally 2 times a day for 5 days ***OR*** 400 mg orally 3 times a day for 5 days ***OR*** 200 mg orally 5 times a day for 5 days ***OR*** • Famciclovir 125 mg orally 2 times a day for 5 days ***OR*** 1000 mg orally 2 times a day for 1 day • Valacyclovir 500 mg orally 2 times a day for 3 days ***OR*** 1 g orally once a day for 5 days	
HIV INFECTION	Higher doses and/or longer therapy recommended. See 2006 CDC guidelines.	
PEDICULOSIS PUBIS[12]	• Permethrin 1% cream rinse applied to affected area and washed off after 10 minutes ***OR*** • Pyrethrins with piperonyl butoxide applied to affected area and washed off after 10 minutes	Malathion 0.5% lotion applied for 8-12 hours and washed off ***OR*** Ivermectin 250 ug/kg repeated in 2 weeks
SCABIES	• Permethrin 5% cream applied to all areas of the body from the neck down and washed off after 8-14 hours ***OR*** • Ivermectin 200ug/kg orally, repeated in 2 weeks	• Lindane[13] 1% 1 oz of lotion or 30 g of cream applied thinly to all areas of the body and thoroughly washed off after 8 hours
BACTERIAL VAGINOSIS (BV)	• Metronidazole[14] 500 mg orally 2 times a day for 7 days ***OR*** • Metronidazole gel 0.75% intravag. once a day for 5 days ***OR*** • Clindamycin cream 2% intravag. at bedtime for 7 days	• Clindamycin 300 mg orally 2 times a day for 7 days ***OR*** • Clindamycin ovules 100 g intravag. at bedtime for 3 days
PREGNANCY AND BV[14]	• Metronidazole[14] 500 mg orally 2 times a day for 7 days ***OR*** • Metronidazole[14] 250 mg orally 3 times a day for 7 days ***OR*** • Clindamycin 300 mg orally 2 times a day for 7 days	
TRICHOMONIASIS	• Metronidazole 2 g orally single dose ***OR*** • Tnidazole[15] 2 g orally single dose	• Metronidazole 500 mg orally 2 times a day for 7 days

GENITAL WARTS

External	Urethral Meatus	Vaginal	Anal	Oral
• **PROVIDER-ADMINISTERED** **Cryotherapy** with liquid nitrogen or cryoprobe. Repeat applications every 1-2 weeks if necessary ***OR*** **Trichloroacetic acid (TCA) or bichloroacetic acid (BCA)** 80% - 90%. Apply small amount only to warts. Allow to dry. If excess amount applied, powder with talc, baking soda or liquid soap. Repeat weekly if necessary ***OR*** **Podophyllin resin 10%-25%[15]** in a compound tincture of benzoin. Allow to air dry. Limit application to < 10 cm^2 and to ≤ 0.5 ml. Wash off 1-4 hours after application. Repeat weekly if necessary ***OR*** **Surgical removal** • **PATIENT-APPLIED** **Podofilox 0.5% solution or gel[15]**. Apply 2 times a day for 3 days, followed by 4 days of no therapy. This cycle can be repeated as necessary for up to 4 times. Total wart area should not exceed 10 cm^2 and total volume applied daily not to exceed 0.5 ml. ***OR*** **Imiquimod 5% cream[15]**. Apply once daily at bedtime 3 times a week for up to 16 weeks. Wash treatment area with soap and water 6-10 hours after application.	**Cryotherapy** with liquid nitrogen ***OR*** **Podophyllin 10%-25%[15]** in a compound tincture of benzoin. Treatment area must be dry before contact with normal mucosa. Repeat weekly if necessary.	**Cryotherapy** with liquid nitrogen. Cryoprobe not recommended (risk of perforation and fistula formation) ***OR*** **TCA or BCA 80%-90%**. Apply small amount only to warts. If excess amount applied, powder with talc, baking soda or liquid soap. Repeat weekly if necessary.	**Cryotherapy** with liquid nitrogen ***OR*** **TCA or BCA 80%-90%.** Apply small amount only to warts. If excess amount applied, powder with talc, baking soda or liquid soap. Repeat weekly if necessary. Many persons with anal warts may also have them in the rectal mucosa. Inspect rectal mucosa by digital examination or anoscopy. Warts on the rectal mucosa should be managed in consultation with a specialist.	**Cryotherapy** with liquid nitrogen ***OR*** **Surgical removal**

[8] Infections with *M. genitalium* may respond better to azithromycin.
[9] If this dose cannot be tolerated, than erythromycin base 250 mg orally or erythromycin ethylsuccinate 400 mg orally 4 times a day for 14 days can be used.

[10] The recommended regimen of ceftriaxone and doxycycline is for epididymitis most likely caused by GC or CT infection. The alternative regimen of ofloxacin or levofloxacin is recommended if the epididymitis is most likely caused by enteric organisms, or for patients allergic to cephalosporins and/or tetracycline.

[11] Metronidazole will also treat bacterial vaginosis, which is frequently associated with PID. Whether the management of immunodeficient HIV-infected women with PID requires more aggressive intervention has not been determined.

[12] Lindane no longer recommended because of toxicity and is contraindicated in pregnancy. Ivermectin not recommended for pregnant and lactating women or for children who weigh < 15 kg. Pregnant or lactating women should be treated with either permethrin or pyrethrins with piperonyl butoxide

[13] Lindane no longer recommended as first line therapy because of toxicity. Lindane not to be used immediately after a bath, in persons with extensive dermatitis and women who are pregnant or lactating, or children aged < 2 years.

[14] Multiple studies and meta-analysis have not demonstrated a consistent association between metronidazole use during pregnancy and teratogenic or mutagenic effects in newborns. Screening for, and oral treatment of, BV in pregnant women at high risk for premature delivery is recommended by some experts and should occur at the first prenatal visit. Intravaginal clindamycin treatment for low risk women should be used only during the first half of pregnancy.

[15] Safety during pregnancy **not** established.

Revised on August 2, 2007